



District Energy System

Section IV of Solid Waste Report to Council for 2004

Response to Questions and Clarifications Requested by Councilmember

Hausser in Letter Dated August 25, 2005



Metro Nashville
DISTRICT ENERGY SYSTEM

Question 1: Performance Guarantees Contained Within Metro's Contract With The Contractor For The Design, Construction, Improvement, Operation And Management Of The District Energy System

- *Construction period successfully completed; Operations period began December 16, 2003*
- *Operations period performance guarantees in place per Management Agreement, including energy efficiency, utility usage and operating cost*
- *Parent Company Guaranty sufficient to cover any unforeseen damages/circumstances per its terms*

ARTICLE XIII

PERFORMANCE GUARANTEES

Section 13.01 System Performance Guarantees. The Contractor shall meet the following Performance Guarantees on a continuous basis during the Initial Management Term and any Renewal Term:

(a) Availability Guaranty

The Contractor guarantees that except to the extent excused by Uncontrollable Circumstances the Facility will operate in accordance with the terms of this Contract, at all times during the Management Period, 24 hours per day seven days per week, regardless of whether such days are Business Days. The only permitted exceptions are for Metro approved scheduled maintenance periods as defined and limited in **Section 12.03**.

(b) Steam Mass Flow Rate and Quality Guaranty.

- (i) *At the Facility.* The Contractor guarantees that except to the extent excused by Uncontrollable Circumstances at all times during the Management Period the Facility will be capable of producing steam at the Facility at a capacity of 195,000 lb/hr at the main header of the boilers, 150.0 psig, saturated, nominal condition.
- (ii) *At All Delivery Points on the EDS.* The Contractor guarantees that except to the extent excused by Uncontrollable Circumstances at all times during the Management Period the Facility will be capable of producing steam at the Delivery Points at a capacity of 160,000 lb/hr, system peak demand, 150.0 psig, saturated, nominal condition.

(c) Chilled Water Guaranty.

- (i) *At the Facility.* The Contractor guarantees that except to the extent excused by Uncontrollable Circumstances at all times during the Management Period the Facility will be capable of producing chilled water at the Facility at a temperature of 43.3°F nominal and in a capacity of 19,890 Tons, measured in accordance with ARI standards at a plant temperature differential of 14.0 deg. F.
- (ii) *At All Delivery Points on the EDS.* The Contractor guarantees that except to the extent excused by Uncontrollable Circumstances at all times during the Management Period the Facility will be capable of

producing chilled water at the Delivery Points at a temperature of 43.3°F and in a capacity of 19,691.1 Tons, measured in accordance with ARI standards, at a plant temperature differential of 10.0 deg. F.

(d) Fuel and Water Usage Efficiency Guaranty.

The Contractor guarantees that the Facility will generate Steam and Chilled Water using Fuel and water set forth below in quantities no greater than the amounts set forth below. With respect to any Contract Year, the guarantees in this Section 13.01(d) are based on average use per unit of energy.

Guaranteed Maximum Quantities ("Q₀")

	For Steam Service	For Chilled Water Service
Electricity	6.0 kwh/k-lb (Note 1)	1.055 kwh/ton-hr (Note 1)
Natural Gas	Note 2	N/A
No. 2 Fuel Oil	Note 2	N/A
Water	Note 3	5.25 gal/ton-hr (Notes 1 and 4)

Notes:

- 1.
2. Based on amount of Steam or Chilled Water, as applicable, actually sold by Metro to Customers (including Metro as Customer) subject to **Section 14.04**.
3. 70% efficiency (HHV Basis), assuming steam sent out of the Facility at 150 PSIG, saturated, to fuel in with 60% condensate return at 180 deg-F (in each case measured at the outside wall of the Facility). For different percentages of condensate return and temperatures of condensate return, the percent efficiency will be adjusted in accordance with the methodology set forth in Appendix 19.
4. (Steam sent out from the Facility in lbs. less the condensate return to the Facility in lbs.) x 1.15.
5. Condenser water only; chilled water excluded.

(e) Environmental Guaranty.

The Contractor guarantees that at all times during the Management Period the Facility shall comply with all environmental standards and Applicable Law.



Question 2: Number Customers Served By NTTC & The New DES During FY04

Fiscal Year	System	Number of Buildings served
FY 2001	Thermal	38
FY 2002	Thermal	38
FY 2003	Thermal	38
FY 2004	Thermal/DES	37
FY 2005	DES	37



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Question 3: Amount of Time Thermal Service to Customers Has Been Interrupted & The Reason for Each

Fiscal Year	System	Outages
FY 2001	Thermal	1 outage from May 23 – 25, 2002: Fire in NTTC Work Receiving Area
FY 2002		
FY 2003	Thermal	1 planned outage from November 10 – 11, 2002: Scheduled Cold Plant Storage Outage
FY 2004	Thermal :	2 planned outages to interconnect the new Energy Generation Facility to the existing energy distribution system: one for steam (48 hours) one for Chilled water (72 hours)
	DES:	None
FY 2005	DES:	1 planned outage December 19, 2004 Scheduled Chill Water Outage (9 hours)



Question 4 Number & Type OSHA Reportable Accidents & Lost Time Accidents At Thermal & DES During FY05

Fiscal Year	System	OSHA Reportable/Lost Time Accidents
FY 2001	NTTC	NTTC Reportable Accidents: 18 OSHA reportable accidents, 6 reportable lost time accidents and 8 days of lost time
FY 2002	NTTC	NTTC Reportable Accidents: 30 OSHA reportable accidents, 10 reportable lost time accidents and 67 days of lost time
FY 2003	NTTC	NTTC Reportable Accidents: One OSHA reportable accidents (Cut Finger During Baghouse Demolition) and 1 day of lost time
FY 2004	NTTC	NTTC Reportable Accidents: No reportable accidents and no lost time
	DES	DES Reportable Accidents: stet reportable accidents (employee struck head on beam) and no lost time
FY 2005	DES	DES Reportable Accidents: No reportable accidents and no lost time

